REMARKS

The indicated allowability of claim 13 is greatly appreciated.

Applicant respectfully requests reconsideration of the Examiner's rejection of independent claims 9 and 16 as being obvious over the combined teachings of Giroux, Qiu and Prasad.

The Examiner contended that col. 2, lines 11-24 of Giroux discloses a demand estimator for estimating a worst case effective bandwidth demand for each class. Applicant does not agree, because this excerpt only mentions *"means for determining the bandwidth requirements of each class of service"*. This is *not* the same as applicant's claimed demand estimator.

The Examiner's attention is directed to col. 1, line 65 through col. 2, line 5 of Giroux, which makes it clear that the weighted fair queue scheduler uses a minimum bandwidth requirement. There is nothing in Giroux to suggest that the minimum bandwidth requirement is a "worst case effective bandwidth demand".

Specifically, at col. 1, lines 65 through col. 2, line 5, Giroux discloses:

*"... incoming packets are received in buffers and outgoing packets are scheduled by a weighted fair queue scheduler characterized in that real-time information of buffer usage along with the **minimum bandwidth requirement** is used to dynamically modify the weights of the weighted fair queue scheduler.*

Preferably the minimum bandwidth requirement is extracted during connection admission control."

In consequence, the only teaching given by Giroux is that a minimum bandwidth requirement is extracted during connection admission control. Claim 9, in turn, requires a *demand estimator for estimating a worst case effective bandwidth demand for each class.*

The Examiner admitted that the combined teachings of Giroux and Qiu fails to teach *the greater of the two demand estimates giving the estimated worst case effective bandwidth demand, and a proportion allocated being dependent on the estimated worst case effective bandwidth demand for each class.* The Examiner, however, contended that these limitations were taught by newly cited Prasad, and that it would have been obvious for a skilled person to combine Giroux, Qiu and Prasad.

In his analysis, the Examiner relied upon various parts of Prasad. However, when these parts are carefully analyzed, it is clear that the teaching of Prasad leads to a bottleneck rate BR that is ***different*** from the "estimated worst case effective bandwidth demand" required by claim 9. Thus, Prasad, in col. 22, lines 23-51 (cited by the Examiner), concludes that the bottleneck rate is given by equation 19. When this equation 19 is analyzed, it is clear that the two values referred to in equation 19 are ***not*** *a short-term burstiness within a traffic envelope and a long-term variance between traffic envelopes.*

Equation 19 defines the bottleneck rate, as follows:

$$BR = \max\left(\frac{R}{N_T}, r_1 + \frac{R - R_T}{m_1}\right)$$

The variables used in equation 19 are:

R - total ABR bandwidth of a link (col. 4, line 15; col. 11, line 36);

NT - total number of flows traversing the link (col. 22, line 15);

- 3 -

r1 - highest cell rate of all flows handled by the link (col. 11, line 16; col. 15, line 34);

RT - aggregate rate of all flows handled by the link (col. 22, line 23; col. 27, line 6); and

m1 - number of flows operating at the highest rate r1 (col. 15, line 33).

Therefore, even if one assumes that a person skilled in the art would combine the teaching of Giroux, Qiu with that of Prasad, the clear teaching of Prasad would result in using the bottleneck rate BR as defined in equation 19, and this is *not* the same as required by claim 9. Hence, claim 9 is new and non-obvious. Similar comments are applicable to independent claim 16, which is also new and non-obvious.

Allowance of the pending claims is respectfully requested.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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